

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

August 22, 2008

Board of Land
and Natural Resources
Honolulu, O'ahu

Request for Approval of a Special Activity Permit for Mr. Ranjan Muthukrishnan, Department of Ecology and Evolutionary Biology, UCLA, and Designated Assistants to Conduct Scientific Research Activities in Certain State Marine Waters of the island of O'ahu, on Live Rock and Coral

Submitted herewith for your consideration and approval is a Special Activity Permit as authorized in Section 187A-6, Hawaii Revised Statutes (HRS). Section 187A-6 provides that the Department may issue permits no longer than one year (from date of issue) to any person to take aquatic life, possess or use fishing gear, or engage in any feeding, watching, or other such non-consumptive activity related to aquatic resources otherwise prohibited by law for scientific, educational, management, or propagation purposes, subject also to Chapter 195D and any other restrictions the Department deems desirable.

Such permits are usually sought by University researchers and their students, professional biologists, consultants, aquariums, or public and private school teachers to either collect aquatic life otherwise considered unlawful, or to use gear otherwise considered unlawful, primarily for the purposes of study or education. Mr. Muthukrishnan and his designated assistants propose to transplant various invasive marine algae onto live rock and adjacent to small coral colonies to gauge their impact and interactions. The Division has recommended that this work be done only within the Hawaii Marine Laboratory Refuge at Coconut Island as this type of manipulative research is in line with the function of the State's only coral reef research refuge (HRS §188-36), can minimize disturbance of the research activity, and provides for better control on negative impacts on reefs that are either undisturbed or used by the public. Furthermore, the collection of certain attached marine algae (HAR §13-93-2), and the transplantation of living marine life in such a way as might disturb either live rock or live coral (§13-95-71) would suggest the need for a permit from the Department. No live material will be transported out-of-State or inter-island.

The Division of Aquatic Resources has reviewed the application for impact and made recommendations to conserve resources as well as to minimize impacts to those resources. Among other permit provisions, the Division will require an annual report at the end of the permit period to document the efforts of the collections or activities. This permit does not authorize any work in the Northwestern Hawaiian Islands.

RECOMMENDATION:

"That the Board Approve a Special Activity Permit for Mr. Ranjan Muthukrishnan, Department of Ecology and Evolutionary Biology, UCLA, and Designated Assistants to Conduct Scientific Research Activities in Certain State Marine Waters of the State of Hawai'i, related to limited collection and transplantation of algae within the Hawai'i Marine Refuge at Coconut Island, O'ahu."

Respectfully submitted,



DAN POLHEMUS
Administrator

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN
Chairperson

SPECIAL
ACTIVITY PERMIT SAP 2009-07

State of Hawai'i
Department of Land & Natural Resources Issued _____
Division of Aquatic Resources
1151 Punchbowl Street, Room 330
Honolulu, Hawai'i 96813 Expires _____

The Department of Land and Natural Resources hereby grants permission for certain collection of organisms belonging to the people of Hawai'i under the authority of Section 187A-6, Hawai'i Revised Statutes, and all other applicable laws, to:

Ranjan Muthukrishnan (permittee)
UCLA Dept of Ecology & Evol. Biology
621 Charles E. Young Dr. S. (510) 325-9961
Los Angeles, CA 90095

This permit is issued with attached conditions to authorize collection and possession of marine flora and fauna, for scientific purposes.

This permit, signed by authorized representative of the Department of Land and Natural Resources (the Department), authorizes the permittee, and assistants designated on the final page(s) of, or attachments to, this permit, to engage in activities otherwise prohibited by law, subject to the conditions, which TAKE, DISTURB, TRANSPLANT, POSSESS, OR KILL certain aquatic life from waters of the State, as follows:

TYPES	DESCRIPTION	LIMIT	LOCATIONS
Marine Algae	<i>Acanthophora spicifera</i> <i>Gracilaria Salicornia</i> <i>Laurencia spp.</i> <i>Hypnea spp.</i>	1 kg wet weight each species; along with Special Conditions.	Waters of Kaneohe Bay -- ONLY.

CONDITIONS

PART I. GENERAL

A. This permit becomes effective when the following process is completed.

1. Each assistant must be listed at the end of this permit.
2. The permittee and each assistant must read the permit completely; and must acknowledge understanding of and agreement to abide by conditions of the permit, by signing *both* copies of the permit in the spaces provided.
3. *Both* copies of the permit with permittee's and assistants' signatures must be returned to the Division of Aquatic Resources (the Division).
4. The permit becomes valid when signed by an authorized representative of the Department; the Department will return one validated copy to the permittee.
5. The permittee agrees to notify the Division immediately of any change in assistants. Additional persons may be added as assistants by validation: each must sign an "Attachment" form, which must be returned to the Division for validation; once approved, such persons are added to the permit.

B. The permittee agrees to obtain written approval of the Division prior to conducting any activity which would be prohibited under the permit (i.e. request in advance changes to permit conditions).

C. This permit does not make the Board of Land and Natural Resources or State of Hawai'i liable in any way for claim of personal injury or property damage which may result from activity authorized by this permit; the permittee and all assistants agree to hold the Board and State harmless against any and all claims of injury, death or damage resulting from actions or omissions under this permit.

D. This permit conveys authority **ONLY** of the Department relating to the Division's jurisdiction over aquatic resources: the permittee remains responsible for obtaining all other prior permission from other applicable authorities (such as owners of and tenants upon private lands; other divisions of the Department; other local, State and Federal agencies--this permit authorizes collecting organisms protected by Federal law only with appropriate Federal authorization).

- E. The permittee and also each assistant is individually responsible and accountable for his or her actions while performing activities authorized by this permit; the permittee is additionally responsible and accountable for the actions of each assistant.
- F. This permit is neither transferable nor assignable to another person.
- G. The permittee or assistant must carry a copy of this permit on location while performing activities authorized by this permit.
- H. Authority granted by this permit ends on the "Expiration Date" on the first page of this permit; within **one month** of the expiration date, the permittee agrees to **return this permit** to the Division with a **Collecting Report completed for the full duration of this permit**, reporting results of *all* collecting under this permit on the form provided with this permit.
- I. The permittee and assistants agree to provide access to data obtained under this permit upon request of the Division, to provide the Division one copy of each report prepared with such data and published for distribution, and to allow Department staff to inspect on permittee's premises organisms collected under this permit.
- J. Violation of any condition of this permit by any person may be cause for immediate revocation of the permit; the person responsible may be subject to penalty as provided by law; violation may be cause also for denial of future permit applications.
- K. The permittee may request change of a condition or conditions of this permit by writing to the Division; if approved by the Department, the Division will issue an attachment ("Amendment") which shall become part of, and amend terms of, this permit. The Department may impose additional conditions to, or restrictions of, this permit by written notice to the permittee.

PART II. SPECIAL CONDITIONS

- 1. **GENERAL STATEMENT:** This permit authorizes collecting, killing, tranplantation, and possession of seaweeds, subject to the other conditions of this permit. It also allows the modification of live rock habitat through transplantation of the allowed seaweed species subject to the other conditions of this permit.
- 2. **LOCATIONS:** Collecting activities under this permit is limited to waters of Kaneohe Bay, island of Oahu **ONLY**, and includes the Coconut Island - Hawaii Marine Laboratory Refuge. Transplantation activities are allowed **ONLY** at Coconut Island - Hawaii Marine Laboratory Refuge

Activities under this permit are expressly prohibited at the following locations.

<u>ISLAND OF MAUI</u> Kahului Harbor FMA ¹ Honolua-Mokuleia MLCD ² Molokini MLCD Ahihi-Kinau NAR ³	Kapaa Canal FMA Waikaena Canal FMA Waimea Pier & Bay FMA	<u>ISLAND OF HAWAI'I</u> Hilo Bay FMA Kealahou Bay MLCD Kailua Bay FMA Kawiahae Harbor FMA Old Kona Airport MLCD
<u>ISLAND OF LANAI</u> Manele Harbor FMA Manele-Hulopoe MLCD	<u>ISLAND OF O'AHU</u> Ala Wai Canal FMA Coconut Island MLR Diamond Head SFMA Haleiwa Harbor FMA Hanauma Bay MLCD Heeiea Kea FMA	Lapakahi Bay MLCD Puako Bay & Reef FMA Waiakea PFA ⁴ Wailea Bay MLCD Wailuku River FMA Wailoa River FMA
<u>ISLAND OF MOLOKAI</u> Kaunakakai Harbor FMA	Kapalama Canal FMA Paiko Lagoon Wildlife Refuge Pupukea MLCD Waialua Bay FMA Waikiki MLCD	Waiopae Tidepools MLCD West Hawaii Regional Fishery Management (comprising 9 Replenishment Areas)
<u>ISLAND OF KAUAI</u> Ahukini Pier FMA Hanamaulu Bay FMA		

¹ FMA - Fisheries Management Area; ² MLCD - Marine Life Conservation District; ³ NAR - Natural Area Reserve; ⁴ PFA - Public Fishing Area

3. **COLLECTING PRACTICES:** The permittee is responsible for persons engaging in activities under this permit behaving professionally and responsibly, in a manner which does not generate conflict with public or private sectors, including fishing and dive-tour industries and local communities.
 - a. Collecting activities under authority of this permit must be supervised directly, on site, by either Mr. Ranjan Muthukrishnan or his appointed representative (who must be a signatory of this permit). The permittee will acquire the permission of the Director of HIMB (or her designee) prior to conducting any collection

activities and specifically prior to any transplantation activities in the waters within the Hawaii Marine Laboratory Refuge.

- b. An approved alien species protocol will be filed with DAR prior to initiation of collection or transplantation activities. Protocol will include mechanisms for ensuring that the individuals listed on this permit do NOT serve as vectors for the transport or introduction of alien species through their activities. **This is specifically aimed at the collection, handling, and movement of the alien seaweeds and invasive cyanobacteria listed under this permit,** along with various marine organisms that may be taken in habitats containing the listed invasive and alien marine species.
- c. **No extractive or invasive sampling will be done on any intact live coral colony.** Specific efforts will be made to avoid damage to any colonies of coral.
- d. Except as specified expressly in an approved collecting plan, no organism unlawful for taking or possession by reason of size, under law or administrative rule, may be collected or utilized under this permit.
- e. No coral species will be collected or impacted by activities conducted under this permit.
- f. The Division may require the permittee to accommodate presence of an observer specified by the Division during collection and research activities. A record will be kept of each collection comprising specific location, date, species and amount collected. This record will be made available to the Division upon request.

4. **NOTICE:**

- a. Collecting Generally - the permittee must give notice, in a form specified by the Department, to the O'ahu DAR office *and* to the O'ahu office of the DLNR's Division of Conservation and Resource Enforcement (DOCARE), at least 2 hours prior to initial commencement of any collection activity under this permit to take place outside of the Research Reserve area surrounding Coconut Island (HIMB).
- b. Mass mortality - the permittee must notify DAR O'ahu within one day of
 - 1) Any instance of major damage caused to coral or other marine natural resources as a result of collection or other research activities conducted under this permit.
 - 2) Any un-planned mass die-off of collected material after field collection.
- c. Rare Species - The following *Porites*, *Pocillopora*, and *Montipora* species require special permission from DAR prior to collection,

take, or disturbance of any kind under this permit: *Porites pukoensis*, *Porites duerdeni*, *Porites studeri*, *Pocillopora ligulata*, *Pocillopora molokensis*, *Montipora dilitata*. Both *P. duerdeni* and *M. dilitata* are known from the waters immediately around Coconut Island. Care needs to be taken not to disturb in any way these colonies.

5. **GEAR AND METHODS**

Use of any chemical substances pursuant to Section 188-23, Hawai'i Revised Statutes, **electrical shocking devices, or explosives remains expressly prohibited.**

6. **USE OF ORGANISMS:** Live organisms taken from Hawai'i waters under authority of this permit may be used only for scientific study on O'ahu, except as authorized by prior written approval of the Division:

- a. Organisms collected under authority of this permit may not be used for personal consumption or sale; organisms collected under this permit may not be traded, bartered or loaned to other individuals, institutions or entities;
- b. Written approval must be obtained from the Division prior to
 - 1) Purchasing or any other acquisition of regulated organisms (regardless of origin) alive from any other party,
 - 2) Transporting any live organism (regulated or not) between islands, or outside of Kane'ohe Bay, O'ahu.
 - 3) Exchanging or donating any organisms collected under this permit to any other person, party or organization;
- c. The permittee may not convey in any fashion (including, but not limited to, selling, trading, or giving) any specimen collected under this permit to any person or party in Hawai'i which does not already have a permit from the Department authorizing possession of same and without direct, written approval from the Division;

7. **TRANSPLANTATION:** All algal transplantation activities shall take place **only** within the confines of the Hawaii Laboratory Marine Refuge. No algal transplantation shall take place next to any colony of live coral 0.5 m in diameter or larger.

- 1). All transplantation sites will be GPS'd.
- 2). All transplantation sites will be photographed pre-transplantation and immediately after transplantation. Photos will also be taken of each site at the end of the experiment.
- 3). Corresponding GPS and associated photos will be provided to DAR upon request and with the final report.
- 4). Any cage structures erected over transplantation sites will each bear a fixed, waterproof tag with the permit number (SAP 2009-07) and the Permittee's name on it.

- 5). Each cage structure placed on the bottom will also be GPS'd and photographed as outlined above for transplantation sites.
8. **ANNUAL REPORT:** Upon expiration, the permittee must provide to the Division a final written report summarizing results of collecting activity carried out under this permit and the analysis of the data:
- a. The annual report should provide a written explanation as to how the collection of a fully-protected marine species for scientific study is benefiting the State of Hawai'i in general and specifically, the improved management of the species.
 - b. The final report must describe, in form specified by the Department,
 - 1) Names and total numbers/quantities of all specimens collected under this permit,
 - 2) Their dispositions (e.g. on display; released/returned to the ocean; died),
 - 3) **Description of any additional benefits** beyond the scientific analysis provided to the Division or the public during the period;
 - c. An inventory of organisms (dead or alive) present at the facility or with the permittee the end of the report period, in form acceptable to the Division, must accompany the annual report;
 - d. The annual report is due at the Division's Honolulu office within one calendar month after expiration of the permit, and is required prior to any renewal of this permit.

VALIDATING SIGNATURE

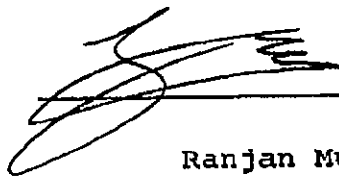
LAURA H. THIELEN, Chairperson

Department of Land and Natural Resources

cc: DLNR Division of Conservation and Resources Enforcement
Special Agent in Charge, US Fish and Wildlife Service Honolulu

ACKNOWLEDGING SIGNATURES

By signature below, I attest that I have read and understand the General and Special Conditions of Scientific Collecting Permit SAP 2009-07 and that, further, I agree to comply with all of these conditions when collecting under authority of this permit.



Ranjan Muthukrishnan

Primary Permittee

Designated Assistants

Sign Type name	Sign Type name
Sign Type or print	Sign Type or print
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